Volunteer Firemen

AUGUST 1943

NATIONAL FIRE PROTECTION ASSOCIATION INTERNATIONAL
60 Batterymarch Street Boston 10, Massachusetts

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GOOD NEWS
FOR FIRE DEPARTMENTS

Heretofore FOGNOZLS have been constructed of critical materials which have restricted Fire Departments from securing the advantages of this equipment.

For several months our engineers have been experimenting with non-critical materials and have developed nozzles for you which will be in production soon.

In the meantime, send for your copy of FOGNOZL FACTS so that you will have the latest information on this subject as to present models, sizes and specifications.

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  TO FIREMEN AND FIRE VICTIMS
- RAPID EXTINGUISHMENT
  A MATTER OF SECONDS
- REDUCED WATER DAMAGE
  A RATIO OF 1 TO 30
- ECONOMY & AVAILABLE SUPPLY
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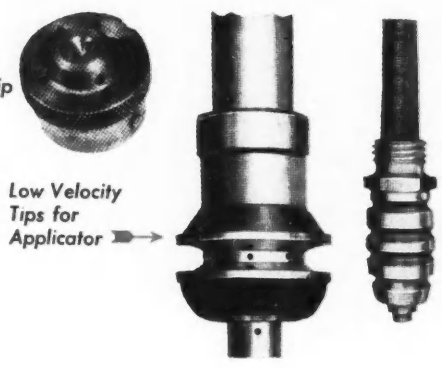

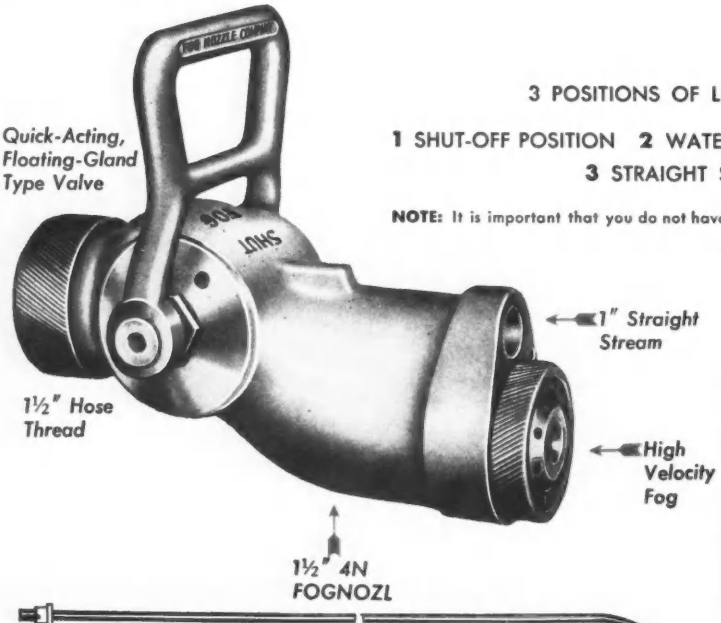

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3 STRAIGHT STREAM POSITION

NOTE: It is important that you do not have to go through the straight stream to get the fog.

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FOGNOZL FACTS

PREPARE NOW BY ACCUMULATING DATA ON THIS NEW WATER FOGNOZL FIRE-FIGHTING METHOD THAT HAS REVOLUTIONIZED OLD METHODS. FOGNOZL ACCOMPLISHMENTS ARE DAILY EMPHASIZED BY OUR ARMED FORCES.

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IN FOLDER CONVENIENT FOR YOUR FILE

GRISWOLD ORIGINAL WATER FOGNOZL

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Volunteer Firemen

THE cover picture this month shows the ruins of a refrigeration equipment factory that burned at Middle Amana, Iowa, on June 7, 1943. Fire presumably started in the paint shop of the 2½-story brick factory which was engaged in making portable cooling units for the armed forces. It is reported that equipment already crated for shipment overseas was destroyed.

Newspapers reported the loss at $250,000 but State Fire Marshal John W. Strohm, of Iowa, reports that the monetary loss will be less than this amount, although he does not attempt to estimate the value of the destroyed equipment or the destroyed productive capacity of the plant in terms of interruption to the war effort.

Fire was discovered by the night watchman when he came on duty at 10 P.M. and the blaze was beyond control when the Amana Fire Department arrived. Help was called from Cedar Rapids, Iowa City, Marengo, Oxford, Tiffin, and Fairfax.

The destroyed plant was operated as a part of the Amana Colonies, a religious community some twenty miles outside of Cedar Rapids. One member of the colony reportedly has confessed to setting the fire. This fire again emphasizes that each community must be increasingly vigilant to guard against fires that may hurt the war effort. The Amana Colonies are known as model communities, but, as Marshal Strohm points out "There is always one in every group — they cannot all be perfect."

IN a recent talk before the Eastern Association of Fire Chiefs meeting in Baltimore, Director James M. Landis, of the U. S. Office of Civilian Defense, expressed the opinion that firemen should receive a selective service classification similar to that assigned to physicians. He stated that the draft has seriously depleted fire fighting forces and that "the problem has reached proportions which involve a real threat to the public safety in some of the critical war zones of this country."

"Firemen have always been regarded as persons in an essential industry by the selective service system," Landis said. "This, of course, never meant that they should be automatically deferred. It does mean, however, that in critical areas where fire hazards to war industries have increased abnormally, where manpower shortages are acute, firemen have an essential significance to this country."

The remarks by the Director of Civilian Defense might have also stressed the fact that many of the 14,000 volunteer and part-paid fire departments face a manpower problem much more serious than that of the some 1,000 larger communities with full-time fire forces. Many important war industries are located in small cities and towns depending upon volunteer fire departments for protection.

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THE VOLUNTEER FIREMAN

IN a recent pamphlet issued jointly by the Army and the Navy to industrial plants throughout the country, the following statement appears:

"The War and Navy Departments expect all executives responsible for fire protection to be fully informed on fire protection matters in their plants and to have at hand for study and reference such technical books, pamphlets and periodicals on fire protection as may be necessary to equip them to discharge their duties effectively."

We believe that this suggestion is sound and that it applies equally well to fire departments as to industrial properties. The prime function of this magazine and, in fact, of the National Fire Protection Association is to furnish the people concerned with fire protection matters "technical books, pamphlets and periodicals on fire protection."

The policy of practically every progressive volunteer fire department is to encourage its members to keep up to date with all current developments in methods of fire fighting and fire waste control. We have occasion from time to time to talk with men with wide contacts among fire departments in various parts of the country and we are always gratified when we show to these experts a list of the volunteer fire department members of our Association in their territory that their reaction is that the list includes the progressive departments in the territory. Once in a while we ask such a man for a list of the best-run volunteer departments in his state or area and nearly always find that such a list checks very closely with our membership in the area.

We believe that our volunteer fire department members can do a service to us and to their neighbors if they will recommend VOLUNTEER FIREMEN and the National Fire Protection Association to the volunteer departments nearby. The more departments that are members of our Volunteer Firemen's Section, the more widespread can be the exchange of ideas and information which makes the Section of value.

Percy Bugbee

A Seven Pumper Relay

By Edwin L. Ballard

Control Room Chief-Fire, Erie County (New York) Council of Defense

A SEVEN-ENGINE relay was carried out on Sunday, May 16th, at the Village of Townline, N. Y., by seven volunteer fire companies with pumpers varying from 500 to 1,000 gallons capacity. Fire companies from Alden, Lancaster, Millgrove, Marilla, Elma, Bowmansville and Townline participated. On the previous Thursday evening a meeting at the Townline fire hall was attended by all the fire chiefs and drivers who were to participate. This meeting, conducted by Erie County Fire Administrator Raymond Kirsch and Chief Weber of the Townline Fire Company, was held to consider essential details such as hose loads, methods of laying hose, suction adapters, means for discharging air, use of nozzles for relief, signals between engines, probable operating pressures at suction and discharge hose, and traffic control.

On the day of the relay the various fire companies left their quarters at times appropriate for arrival at 2 P.M. at the Townline fire hall. County Fire Administrator Kirsch placed in operation the Niagara Frontier Mutual Aid System for covering districts left open by the companies attending the relay. After a short review of the operations for the benefit of the pump operators, the evolution got underway.

The objective of this relay was the securing of a good 1-inch nozzle stream of 200 or more gallons per minute at 50 pounds nozzle pressure, through more than one and a quarter miles of 2½-inch hose. It was also planned to compare a direct pumper to pumper hookup with the emergency basin scheme in which a canvas basin is used for suction at each pump beyond the engine at the source of supply.

The scheme of laying in consisted of giving each pumper a position number commencing at the suction source at Cayuga Creek. Numbers 1–2–3–4 delivered water north on Townline Road to near the intersection with Broadway, a distance of eight-tenths of a mile. Numbers 5–6–7 led westward on Broadway making a total distance of 6,700 feet.

AS all hose was loaded with the nozzle or male end out it was necessary to lay the hose from the discharge point back to the suction source in order to avoid turning apparatus on narrow roads. This was accomplished by having No. 7, the nozzle delivery engine, followed by engines No. 6 and No. 5, proceed westward on Broadway and turn around at a safe place beyond the nozzle position. No. 7 then laid 700 feet of hose from the nozzle position and Nos. 6 and 5 in turn laid 1,000 feet each. Then pumpers 4, 3, 2, and 1, in turn, laid 1,000 feet along Townline Road, ending with pumper No. 1 in position for drafting on the bridge over Cayuga Creek. The measured lift of 16 feet 6 inches was easily accomplished by the Alden 1,000-gallon pumper

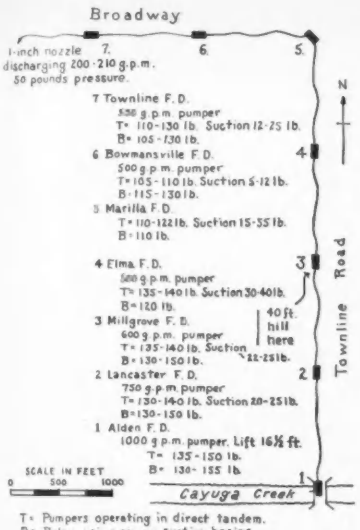
Effective signalling was accomplished by the use of a striped blue and white target of wallboard 20 inches square and mounted on a 6-foot standard. The blue and white target was kept aloft for normal procedure, and this was promptly replaced by a similar target of red in case of breaks or other trouble. Both types of targets were carried on each engine and additional targets were placed where visibility from engine to engine was obscured, thus allowing operators to control their pumps to meet each situation.

As a provision to assure the safety of clutches, gears, and to avoid the necessity for stopping pumpers on the supply side of possible breaks in the line, a 1-inch nozzle was placed on a spare hose gate on each pumper so that the flow could be discharged to atmosphere in case the gate controlling the hose line was to be closed. This was a very important matter as there would have been too much danger to the pumpers in closing a line valve or nozzle and also there would have been delay if a shut-down had caused the loss of suction.

Pumping was commenced and pressures were slowly raised until the various pumps were operating with pressure readings of between 110 to 150 pounds. Unfortunately, there was no opportunity to calibrate the pumper gauges and some of these may have been inaccurate to the amount of 10 to 20 pounds. Arrangement and distances precluded synchronized observations.

As soon as the air was driven out of the line and water came to the spare 1-inch nozzle at each pump, the pumps were

Right: Start of relay by seven pumpers at Townline, N. Y. The 1,000 g.p.m. pumper of the Alden Volunteer Fire Department is taking suction at 16½-foot lift and discharging through 1,000 feet of 2½-inch hose to the next engine. The man on top of pumper is holding a signal target. Below: 6,700 feet distant a 200-gallon fire stream is being discharged through a 1-inch nozzle tip at 50 pounds pressure.



Seven Pumper Relay, Townline, New York

started and the spare nozzles and churn valves were closed. Suction pressures varied between a low of 5 pounds and a high of 35 pounds. Discharge pressures were from 110 to 130 pounds. The final engine in the relay carried 22 pounds suction and 130 pounds discharge pressure.

Mr. George Leo, Master Mechanic of the Buffalo Fire Department, who served as supervising operator, make a quick tour of the entire relay, assisting the operators in the proper regulation of pumper suction and discharge pressures. When steady operation was obtained and 50 pounds nozzle pressure was registered by a Pitot gauge, all pressure readings were noted and a moving picture record was photographed. This first evolution then being completed, orders to shut down the relay were given by means of the target signals.

THE second evolution, involving the use of emergency dams was then carried out. These basins had been set up during the previous operations. These dams, triangular in shape, were framed by taking a 24-foot extension ladder apart to form two sides, with a 14-foot roof ladder completing the triangle. A large salvage cover supported by the ladders formed the basin. Each basin was supplied by the open 2½-inch butt of the hose line from the preceding engine. Care was taken to prevent air from being carried into the hard suction strainer by keeping the feeder line and suctions at opposite ends of the basins.

There appeared to be advantages in using the emergency basins over that of direct connections, inasmuch as engine pressures were somewhat lower for similar nozzle pressures. In the first relay (direct connected) engine pressures varied from 110 to 150 pounds. During the second or basin-type relay, pressures were from 105 to 130 pounds. Under this plan each engine was working individually and severe hydraulic surges were avoided. The use of suction basins would be a lifesaver where hose and suction threads are not interchangeable. However, great care must be exercised to prevent appreciable overflowing as this will seriously increase the friction losses and could overload the engine at the source of water. Deeper suction tanks, such as used in England, would practically solve this feature.

Several of the gasoline throttles on the pumpers were of such poor arrangement that close and positive regulation of the engines was impossible. In relay operation it is highly important to get slight but positive changes or adjustments of speed. Instead of micrometer-fine adjustments, we had to put up with throttles accidentally jerked too far open or partly closed, with consequent hydraulic disturbances. To prevent burst hose or damage to pumpers the operators were instructed to limit discharge pressures to 130 pounds and in no case to exceed 170 pounds.

Some of the "bugs" to be considered during relay operations are: nervousness of pump operators, changing pressures too rapidly either up or down, inaccurate pressure gauges and gauges stopped down too far, need of accurate knowledge of the footage of hose in each load, need for ignoring very short lengths in counting lengths of hose laid, need of a better working knowledge of hose threads in adjacent fire districts.

In this relay there was a nozzle elevation above the discharge gate at No. 1 engine of approximately ten feet. However, between No. 1 and No. 3 engines there was a rise of about forty feet. No special compensations were made for this as the pump operators were fully capable of taking care of this situation. Further on there was a gradual fall of about thirty feet.

Needless to say the success of the operation was largely due to the effective cooperation between the officers and men of the various fire companies. Prominent Civilian Protection officials and officers of the U. S. Army and U. S. Coast Guard praised the fire fighters who carried out these practice evolutions. The cooperation of Fire Commissioner John J. Tubridy and other Buffalo fire officials was very helpful.

A FLYING FIRE ENGINE

MR. PETER PIRSCH, President, Peter Pirsch & Sons Co., fire apparatus manufacturers of Kenosha, Wisconsin, sent the drawing below, showing "the fire engine of tomorrow." This is inspired, no doubt, by the publicity recently given to Mr. Sikorsky's helicopter which can ascend vertically and hover practically motionless in the air.

Mr. Pirsch observes, "In Ben Franklin's time, the hand pumper was the fire engine of tomorrow. In the 1820's the steamer was the fire engine of tomorrow. In the 1900's the auto fire engine was the engine of tomorrow. So, it is only natural that in 1943 the flying fire engine is the fire engine of tomorrow."

Here's Mr. Pirsch's conception of how fire calls may be handled in the coming helicopter age:

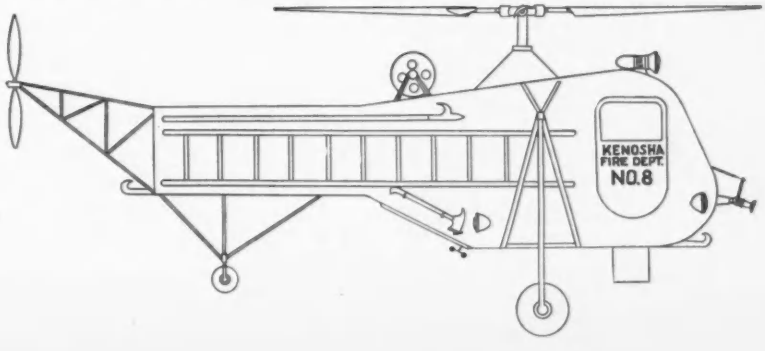
"Hello, hello. This is the Round the World Aerial Freight Line. We have a fire in the freight department of our ship and can't handle it. Meet us with the flying fire engine. We will be over Kenosha in seventeen minutes. Elevation 2,000 feet. By the way, bring a smoke ejector along, lots of smoke."

"O.K. We will come to meet you. Drop your hollow hawser and we will give you plenty of fog and blow out the smoke."

Mr. Pirsch calls his view into the future "Imagineering." A letter from him recently published in the magazine *Aluminum News Letter* reads in part.

"Suppose that Al Smith was hemmed in by a fire in his top floor office of the Empire State Building, with no way to escape except to jump out a window — no fireman able to get near him, no water because the hose rack is burned, or the standpipe and elevator wrecked by bombs or explosions, or frozen.

"Wouldn't a helicopter fire engine be welcome up there at the window to put out the fire, or rescue Al . . .?"



Country Grain Elevator Fires

By R. D. McDaniel, Vice President
Grain Dealers National Mutual Fire Insurance Company

Typical country grain elevator.

TO the volunteer fireman of the average rural community in the Middle West, by which I mean the grain-growing states from Ohio to the Rockies and from the Texas plains northward into the provinces of Canada, the country elevator represents the property of greatest value in his town and the toughest possible fire-fighting assignment he is likely to encounter.

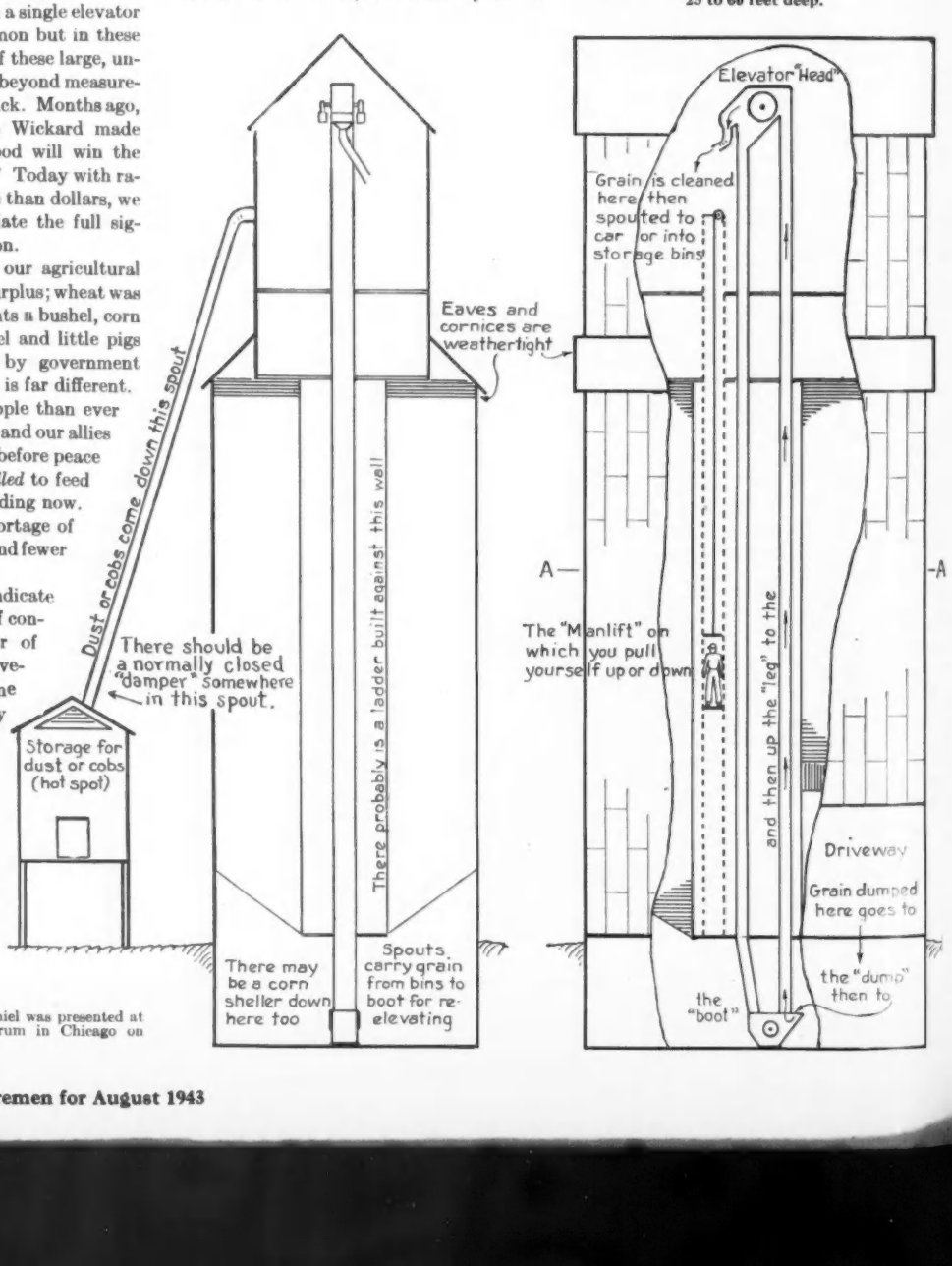
In terms of common measurement, values of $125,000 to $150,000 in a single elevator are by no means uncommon but in these days the intrinsic value of these large, unbeautiful structures is far beyond measurement by the dollar yardstick. Months ago, Secretary of Agriculture Wickard made the statement that, "Food will win the war and write the peace." Today with ration points more valuable than dollars, we are beginning to appreciate the full significance of that prediction.

Only a few years ago our agricultural areas were glutted with surplus; wheat was selling for twenty-five cents a bushel, corn was being burned for fuel and little pigs were being slaughtered by government edict. The picture today is far different. We are feeding more people than ever before, not only ourselves and our allies but neutrals as well, and before peace comes we shall be *compelled* to feed far more than we are feeding now. That in the face of a shortage of agricultural implements and fewer farmers.

Reliable estimates indicate that at the present rate of consumption our carry-over of corn will be down to a five-weeks' supply by the time the new 1943 crop is ready for harvest. We are consuming wheat at the rate of 7 bushels for every 5 bushels produced and it is estimated that to bring production up to the rate of consumption we shall have to produce 1.2 billion bushels of wheat this year — more than we have ever produced before. And we must keep in mind that last year was the most ideal crop year that this country has experienced within the records of the Weather Bureau; we cannot count on a repetition.

Unfortunately we have not yet realized the status of our dwindling food supplies or the effects the losses of comparatively small quantities of raw food materials may have. The loss of 1,000 bushels of wheat — a small carload — would seem insignificant, yet that amount will provide a day's bread ration for 80,000 soldiers plus 20

This is the way elevator would appear if cut through section A-A. These bins may be from 25 to 60 feet deep.


Dust or cobs come down this spout
There should be a normally closed "damper" somewhere in this spout.
Storage for dust or cobs (hot spot)
There probably is a ladder built against this well
Eaves and cornices are weathertight
There may be a corn sheller down here too
Spouts carry grain from bins to boot for re-elevating
Elevator Head
Grain is cleaned here, then spouted to car or into storage bins
A—
—A
The "Manlift" on which you pull yourself up or down
and then up the "leg" to the
Driveway
Grain dumped here goes to
the "dump" then to
the "boot"

This paper by Mr. MacDaniel was presented at the Volunteer Firemen's Forum in Chicago on May 11, 1943.

tons of badly needed stock feed. By a time-honored rule-of-thumb estimating method, 1,000 bushels of corn will produce 8,300 pounds of pork which, if converted into ration points would represent the meat allotment for a town of 500 people for three weeks. Those figures aren't large, comparatively, but we have spoken in 1,000-bushel units whereas country elevator capacities will run from 15,000 or 20,000 up to 100,000 bushels or even more.

Jap soldiers can live on a handful of rice a day, we are told; ours can't nor can those of our allies nor the hungry millions of Europe that we are even now beginning to feed. Surely the protection of country grain elevators which handle, process and store the potential human and animal food that is produced by our farms is tremendously important.

As objects of fire-fighting activities these elevators represent a real challenge to even the best of fire departments. The average country elevator is wholly combustible; there are no cut-offs either horizontal or vertical — in fact, there is normally a decided upward current of air from the bottom to the top whenever the house is in operation; the top of the building (known as the cupola) where a large proportion of fires originate is from 50 to 80 feet above the ground and is accessible only by inside means; the interior, particularly basement and cupola, is likely to be littered with highly combustible refuse, especially if the plant handles corn in the ear; and, lastly, the house is usually covered with corrugated iron, including eaves and cornices, so as to be impervious to water from the outside. Top all that off with the consideration that the contents of these buildings not only are combustible but will be spoiled if soaked by water and you have a fairly complete picture of what you are up against when a country grain elevator starts to go.

TIME was when country elevator losses either were under $200 or else they were total. But that was before the days of well-equipped volunteer departments, before the days when volunteer firemen attended district and state fire schools and learned how to use their equipment and, more particularly, the importance of planning their fire fighting before the occasion for it arises. And it was, I may well add, before the growth of this Volunteer Firemen's Section of the N.F.P.A. with its admirable instructive magazine, VOLUNTEER FIREMEN. All these things have contributed materially to a complete change in the picture.

Now the number of total losses in elevator properties are eclipsed by the number of partial losses running from a few hundred to a few thousand dollars — the kind that a few years ago would, without question, have been chalked up in the total loss column. Considering the kind of buildings these are, you know that to stop a fire that has gained sufficient headway to cause even a few hundred dollars damage somebody had to do a real job of fire fighting. I do not mean to say that total elevator losses are practically a thing of the past — oh, no, for many elevators are entirely without the protection of fire departments (some of the fires are beyond control when discovered) and, unfortunately, not all fire departments have as yet done the necessary to be able to cope successfully with an elevator fire. But I do say, and with great admiration, that the work done by many fire departments — most of them volunteer organizations — in the past few years has conclusively proved that grain elevator fires in protected towns need not be under $200 or else total.

I would not presume to attempt to tell firemen how to fight fire in an elevator or anywhere else — that's the job of the fire schools, and I may add that it has been noticeable that it is the departments which have attended the fire schools that have done most of the outstanding jobs. But a few observations may not be out of place.

IT was previously mentioned that the contents of elevators are not only combustible but are likewise subject to water damage. The use of large quantities of water may not only ruin the grain in storage but, due to the tendency of wet grain to swell, may also result in structural damage to unburned portions of the structure. Consequently the fire should be fought with a minimum of water consistent with the circumstances. Sometimes it is advisable under certain circumstances to open up the storage bins, etiher by means already provided or by chopping holes in the outer walls, thereby allowing the grain to fill up the lower floor and basement of the house or to flow to the outside. Such procedure should be followed, however, only after consultation with the owner or manager of the elevator. And obviously excess water should be kept off the grain following a severe fire because ordinarily grain, unless badly soaked or mixed with debris, offers very good salvage possibilities.

Grain dust, as you know, is explosive. But most of the so-called dust that you will find in an ordinary country elevator is just plain dirt and is *not* explosive. That is the reason there have been very, very few dust explosions in country elevators and I have no personal knowledge of any that have occurred during fire-fighting operations. There have been a few minor explosions, usually resulting only in property damage, in the Northwest states that seem to have been due entirely to certain equipment or methods used there for the grinding of grain for feeding purposes. It would be possible to find true grain dust in an elevator that had been handling wheat that was badly infested with weevil but I know of no explosions in country elevators that could be attributed to that cause. There have been minor explosions that could have been due to that cause, or to the use of fumigants, but none of these relatively few incidents occurred while fire was in progress.

Hose streams from the ground are never effective on cupola fires as elevators are designed to shed water to protect their contents from the weather. Unless lines are taken up to the seat of the fire, the blaze will be beyond control when it has burned down to within reach of streams from the ground level.

Spontaneous ignition of some kinds of grain and ground feed in bins is not uncommon. Considerable finesse is necessary in handling such feed or the entire property is likely to become involved. Best practice

Large elevator was saved by knocking down the spouts connecting the tile cob and dust houses when contents of the latter ignited spontaneously.

The start of an elevator fire. A good volunteer department could have handled this even though no cupola sprinklers with standpipe connection were available.

Ten minutes later — There not only were no sprinklers, there was no fire department. The elevator was a complete loss inside of an hour.

dictates that charged lines with shut-off nozzles be held in readiness both above and below the bin in question while the contents are carefully removed. Where the bin is near an outside wall it may be advisable to cut a hole in the wall and remove the contents directly to the outside of the building. At the same time the removal is taking place, adjoining bins should be watched for evidence of communicating fire.

Familiarity with the elevators is, of course, of prime importance and we are finding that chiefs and members of their departments are making inspection trips to the plants, working out plans of action on the ground. In many instances they take their apparatus to the plant, practice layouts and devise methods of taking small lines to the top of the building, and then they will hook up and see how much pressure is required to shoot water over the top. Naturally they study the layout of the building at the same time and that, too, is very important because a grain elevator is a peculiarly constructed building, and such knowledge is necessary not only to effective fire fighting but to the personal safety of the fire fighters as well.

THE experienced fireman will make mental note of certain things that should be done under various circumstances such as the necessity, in case the fire is in a lower building, such as a cob or dust storage house, connected by spout to the main structure, of immediately blocking off or knocking down the connecting spout. And he will observe the great possibility of embers falling out of sight into studded partitions, deep open bins and a multitude of other concealed spaces only to cause a rekindling of the fire in a few hours later. Following a fire in a grain elevator a watchman should be posted for at least twelve hours for a spark in dust may smoulder that long.

Many chiefs have gone beyond their municipal limits and contacted the owners of all elevators within their running radius. They expect to answer calls if needed and want to familiarize themselves with possible local sources of water supply. In many cases the property owners have been prevailed upon to construct cisterns for, obviously, there isn't much point in taking a pumper several miles into the country if there isn't going to be anything to pump.

Below: Volunteer firemen cooling hot spots in grain pile with small stream preparatory to beginning salvaging operation.

UPON occasion these firemen may make appropriate recommendations for improvements. Almost invariably they see the need for a fixed steel ladder on the outside of the building but this, as well as non-automatic sprinklers with standpipe connections, will have to wait until such materials may more readily be obtained. The need for them is obvious to a fireman and is being rapidly recognized by the elevator men themselves. Generally surprise is expressed by firemen at the well-maintained first-aid fire protection equipment in evidence, the rather general use of anti-friction bearings on machinery, magnetic separators ahead of grinding equipment, fully enclosed electric motors and excellent wiring, lightning protection both on the building and on the wires supplying the electric power. Quickly they become aware that the elevator man knows pretty well what his hazards are and is watching them carefully — that he is, in fact, highly fire conscious and inclined to be cooperative. For that is so in the majority of cases. Thereupon there arises a mutual feeling of esteem and understanding between elevator operator and firemen, each for the other. And that is good.

Roughly here is a description of a country grain elevator. The grain is brought through the driveway in trucks, and is dumped by mechanical means into a hopper. It goes through into the basement by conveyor or dragline, where it is picked up in a bucket elevator which runs up to the top of the building. That is a continuous belt elevator. The top is called the head and the bottom is called the boot. When the grain gets to the head, it is dumped out and usually run through a grain cleaner. It is then spouted into the bins. There may be anywhere from six to a dozen of those bins in the average country elevator. They may be anywhere from 25 to 60 feet deep, constructed of either studded construction or it may be 2 x 4's, 2 x 6's, 2 x 8's laid on their side and spiked together. The bins may stop above the work floor of the house or they may come down all the way into the basement. Bins will be open at the top, usually, except that there may be a little floor over the center section.

In order to reach the top of this building, there is what is termed a man-lift, which is merely a one-man passenger elevator worked by one manpower, whereby you pull yourself up into the top. It is a very difficult thing for a fireman to use in fire fighting because it goes up with you and you can't send it down by itself. Another difficulty in using the lift is due to the fact that you generally go through a small hole

(*Continued on Page 19*)

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Military requirements called for hundreds of efficient pumpers — quickly — to combat all kinds of fires which might threaten stores and equipment.

As producers of fire apparatus for many years, it was natural that Ward LaFrance received the assignment. Standard truck chassis were converted into 500 gallon-per-minute pumpers, reinforced and equipped for their special job.

Ordinarily, it is preferable to design and build special trucks "from scratch". In this case it was practical to convert standard trucks to special-purpose use, because of the availability of the chassis units.

The moral is: It pays to consult Ward LaFrance when you are considering the purchase of equipment to meet the special needs of your community. Use the experience and knowledge of our engineering specialists. In that way, you'll get maximum protection at minimum cost over the life of the apparatus purchased.

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ELMIRA, NEW YORK

Training Volunteer Fire Departments

By Lieutenant Harry Wolff

Chicago Fire Department

A digest of part of Lieutenant Wolff's address to the Fifth Annual Volunteer Firemen's Forum in Chicago on May 11th. Readers may wonder why a man from the second largest city fire department in the United States was asked to speak on the subject of volunteer fire departments. There was a good reason behind that. Lieut. Harry Wolff has been a very thorough student of modern firemanship. He has repeatedly appeared on the program of the Fire Department Instructors' Conference at Memphis and at various state Fire Colleges. He has worked with volunteer fire departments and has trained at least one volunteer fire department very efficiently. Lieutenant Wolff was formerly Secretary of the Drill School of the Chicago Fire Department and for some time has been at headquarters as an aide to Chief Mullaney. The remainder of Lieutenant Wolff's remarks, dealing largely with a particular volunteer fire department which he helped to train, will be presented in a future issue of Volunteer Firemen.

WE have had a paid fire department in Chicago since 1869, but our department had not really grown up until we converted from the horse-drawn equipment to motor apparatus. That was about 1922. At that stage of development, we had about the same types of firemen in the paid department as they had in the volunteer departments. Generally, there were about three kinds. I can best illustrate that by a story of a newspaper man's visit to a stone quarry. Three workmen were busily engaged in fashioning a marble piece of building face. The newspaper man stopped the first workman and the man paused in his chipping of the stone to answer the question, "What are you doing?" The first fellow said, "I'm working for $2 a day." The newspaper man made a note of that and approached the second fellow and asked: "What are you doing?" He said, "I'm chipping stone." And when he came to the third man and asked the same question, he got this reply: "I'm helping to build a cathedral."

That represents or typifies, at least, the attitudes of three distinct groups of men in the fire service. Some were working for pay. Some were working because of the thrill of the thing. But those two groups were in the minority. By far the greater proportion of the men were conscious of the fact that they were a part of the civic service and were rendering service to their community to the best of their ability.

Volunteer departments receive little or no pay, so that rules out the men who are working just for a job. We are left, though, with the second of two groups. Some of the men do this thing for the fun of it, the thrill of it. But most of the volunteer men as well as the paid firemen, realize they have a civic obligation and they are doing their utmost to carry it out. This is especially true in volunteer departments, because the personnel of the volunteer departments is made up largely of business men. They, as well as the home owners who make up the membership of the department, have considerable at stake in the successful operation of the department. That is one of the reasons why the volunteer departments have progressed so far in so short a space of time.

I would like to go on record as modifying the term "Training Program" upon which I was scheduled to talk. I think that it should be enlarged a little and called a "Service Program," to embrace all of the services that a fire department performs. I think it should start in a fire prevention program, because, no fire department is large enough to cope with all the fire possibilities of a city. The best protection that a fire department can give to the citizens of the community is the development of a fire prevention program intelligently planned and carried out so that the citizens can participate.

THE program should be based on a municipal fire prevention code, something similar to the fire prevention standards of the National Fire Protection Association. It should be supplemented by an inspection program, both from the fire prevention standpoint and the fire fighting standpoint. We not only want to know about the hazards and eliminate them but we want to know about the buildings, conditions in buildings, their contents and structural features so that a fire can be handled efficiently and effectively. And then, for those fires that do start we must have a fire extinguishment program that is effective.

We have got to start with a water supply system that is reasonably adequate for the community although, in these critical times, there is no expansion possible in the way of water facilities except in the most vital industries.

Apparatus must be adequate and must be of a type that is suitable. Many of the smaller departments have found that they couldn't ask the townspeople for bond issues, so the firemen themselves have had carnivals and shows to raise the money to purchase this equipment. In some cases auxiliary equipment, such as salvage cars and hose trucks are made by the volunteer firemen themselves. These are often converted from commercial vehicles.

Another phase of the program of fire extinguishment is the selection of the men to carry out these activities. I think that character qualities of a fireman are much more important than the extent of a man's chest expansion, or the power that he might have in the grip of his hand or something of that kind. Some of the very finest and most able volunteer firemen that I know are not very large in stature, but they make up for their lack of physical size by their great understanding of the problem at hand, and mentally fill in all the gaps that are left by their lack of stature.

In order to work efficiently, these men have to know what they are doing. Before they can do that, they have to be trained. I think that the weakest link in the set-up of training is the instructor. We have men who are ready, willing and anxious to learn. In most cases, they have equipment of a sort, and if it is not suitable, they take immediate steps to get something that will fill the bill.

IN most towns there is a place to drill, whether it is in the fire station itself is not vital. In most cases they are too small and we borrow Jones's barn or Smith's elevator or something of that kind and do our drilling over there. These men, with the willingness and with the equipment to do the job, are handicapped because they have nobody with experience to teach them. Therein lies the principal difference between the paid municipal department and the volunteer organizations. The paid men have more fires, because of the fact they are in communities that are larger there is more chance for fire. That means that they can acquire in a comparatively short space of time enough actual first-hand experience to make reasonably good workmen out of them. In Chicago, our

(Continued on Page 15)

Winning the *"Battle of Production"* involves a lot more than a supremacy of materials, machinery and manpower. One major fire . . . or a small fire that results in crippling damage by the extinguishing medium . . . can halt or slow down war production in a dozen vital plants.

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By instant smothering of fire and cooling of combustibles through the mass discharge . . . at high rate of flow . . . of low pressure, low temperature CO_2, Cardox Systems provide the all-important advantage of fast, complete extinguishment of large or small fires—without damage by the extinguishing medium.

Today, Cardox is concentrating its engineering and manufacturing facilities on two basic activities: (1) Designing and manufacturing of Cardox Fire Extinguishing Systems needed to make it possible for the Armed Forces of America to have more planes, guns, tanks and ammunition; (2) working with industry on plans to increase the efficiency of fire protection both today and after the war.

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National Foams Have Gone to Sea *to Save Lives and Property*

Official U. S. Navy Photographs

National Foams are as efficient in fire fighting as are our soldiers and sailors in battle. The fire shown above broke out on an American tanker after a torpedo struck amidship. This tanker was equipped with fire foam control and the fire was quickly extinguished, saving both crew and tanker.

The modern principles of fighting fire with foam have been developed and perfected by National Foam System, Inc., whose parent organization was engaged in the study and promotion of better methods of extinguishing fires since 1819. National Foam System, Inc. are leaders and recognized authorities on fire foams and foam fire fighting equipment.

National Foams excel under this four-way test:

They flow evenly and spread to make a flowing blanket;
Bubbles cohere, forming a gas-tight cover;
Adhere tenaciously to surface covered;
Foam remains intact sufficient time to extinguish the fire and prevent flash-backs.

National Foams have been adopted and are used extensively by the U. S. Navy as well as most oil refineries and many other important industries.

National Foam System has equipment especially designed for use of Fire Departments to meet all types of fire fighting requirements whether for City, Volunteer or Plant Fire Department use. Our engineers will gladly consult with you and advise regarding type of equipment which will most effectively meet your needs.

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"White Whiskey" Days Recalled by Ancient Schoharie Hand Pumper

SCHOHARIE volunteers are justly proud of their ancient relic, a natty little hand pumper, the first of its kind in Schoharie County, dating back to 1818. It was in the year 1818, when the village of Esperance was incorporated, that its townspeople bought the "Deluge," a purely handmade pumper, less than 10 feet long with a capacity of about 100 gallons.

Whether or not Esperance with its newly formed fire department bought the rugged little pumper of hardwood and hand-wrought iron new or whether it was then well out of its infancy, is not known, according to the historian and curator of the Old Stone Fort Museum on Schoharie's North Main Street, where it found a final resting place in 1889. Fragmentary belief would date the little machine back to the late 1790's, close to the formation of Schoharie County in 1795.

At any rate, the Deluge lived in the hectic days of white whisky when volunteer firemen, according to legend, while not actually hoping for fires, didn't discourage their starting. For tradition sprouting from historic truth says each gallon of water that passed through the pumper was matched in white whisky furnished by the village for the consumption of firemen who stood in lines. Exhausted after a few strenuous minutes of pumping, the left hand operator left his post, which was at once filled as the waiting line moved. The tired pumpman circled to the plentiful supply of white whisky and, after a horn or two, returned to his position as long as he was able, say veterans, while another left for a horn of whisky.

Manned by three or four men on each side, it is believed the diminutive forefather of modern pumpers was capable of throwing a stream of water the height of a three-story building, which then was the extent of country stores and houses. Prior to the days of hosing, two six-inch pistons connected to the side rails forced the water brought to the tank by bucket brigades through a pivotal brass elbow and four feet of tapering brass pipe operated by a man atop the pumper, which is less than six feet high. Carried with it were two gallon leather buckets for the formation of the brigade.

Another relic of the Schoharie department is the "Niagara No. 6," believed by many to be the origin of Schoharie's Niagara Engine Company. It was bought from Albany in 1868, a year before the Schoharie courthouse burned. It had been in use at the capitol for five years. Hauled by hand, it contained suction pumps and was manned by 20 or more men to each side. Albany has had it on parade for the

Hudson-Fulton celebration in 1914 and again for the Dongan charter celebration in 1936. Throughout the capital district it is still known as "The Pride of Albany."
—NEW YORK STATE VOLUNTEER FIREMAN
Vol. 9, No. 1.

Training Volunteer Fire Departments

(Continued from Page 10)

engine companies average between 300 and 400 fire calls a year. That means that each fireman working on alternate days accumulates the experience of attending at least 150 fires in a year's time. When you compare that with the fire department that has not had a fire in eighteen months, these men are a little short on actual experience. When they are faced with a problem they haven't encountered before, they are a little bit uncertain. They will do their darndest with what they have but they are not sure whether they are following the best plan. In the end, they will win out, but they have that handicap not faced by the larger departments.

I don't expect to outline a training program. That has been done very ably by the Committee on Firemen's Training of the National Fire Protection Association. That Committee met for the first time some sixteen months ago here in Chicago and, as their first job, perfected a program for the training of auxiliary firemen for civilian defense purposes. That training program was adopted in toto by the Office of Civilian Defense in Washington and now forms the basis of all training programs for auxiliary firemen.

There is another kind of drill that a good many volunteer fire departments engage in that has a certain value as far as public relations are concerned, but I am wondering whether they have much actual value in fire-fighting tactics as some of the men who participate in those drills think. These are the drills that are put on in the nature of a contest at conventions.

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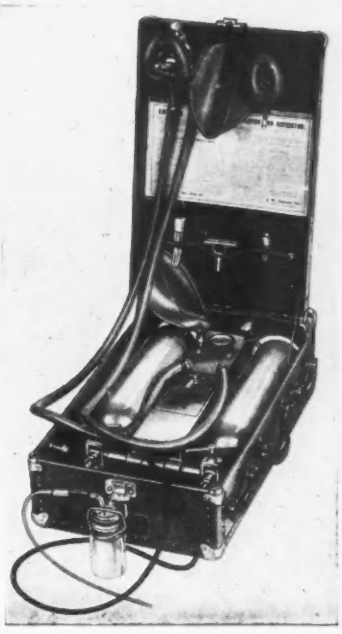

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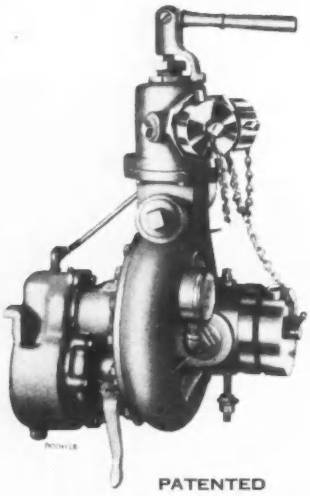

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is an organization that will function effectively twenty-four hours each day regardless of shifts, part time operation, or shut-down periods.

During war, when industrial plants, materials, and production are vital to national survival, the hazard of fire is increased because production is speeded up, long hours of operation are necessary, and the plants are major objectives of saboteurs, incendiaries and bombing from the air.

A Good Rule for Fighting Fire in a Sprinklered Building

The Fire department should make sure that after a fire all the sprinklers that have operated are properly and immediately replaced and the protection restored. Reduce to the shortest possible time any interruption of the sprinkler protection. During interruption, emergency measures for protection such as special watch service, emergency water lines, special first aid equipment should be provided. Ensure that no building is left unattended after a fire until sprinkler protection is restored.

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Training

Alabama State Fire College Presents N.F.P.A. Membership to Tuscaloosa, F.D.

THE Alabama State Fire College, held at the University of Alabama, May 31st-June 5th, inclusive, had an enrollment of 73 men representing 17 cities and 18 other agencies as follows: Ordnance Plants, 2; Air Fields, 3; Army Camps, 2; A.A.F. Supply Depots, 2; Arsenals, 1; U. S. Government Hospitals, 2; Internment Camps, 1; Industrial Plants, 4; and State Hospitals, 1.

Instructions were given in the following subjects by the instructors named: 1. War Situations Affecting the Fire Service and Inspection Practices by Emmett T. Cox, 2. Job Instructor Training by Rex Sullivan, 3. Ladder Practices by Captain C. C. Strane, 4. Hose Practices by Captain Clyde Landers, 5. Pump Operation by Captain G. W. Morris, 6. First Aid Fire Fighting and First Aid Appliances by W. M. Walton and J. T. Kraver, 7. Ropes, Knots, and Hitches by Captain H. W. Lawley, 8. Use, Care, and Maintenance of Fire Department Tools and Equipment by Assistant Chief M. L. Waits.

Chief W. W. Stephens of the Monsanto Chemical Company Fire Department gave a very instructive lecture on "Tools and Equipment That Can be Made by Any Fire Department." An outstanding lecture and demonstration on "Airplane Crash Fire Truck and Equipment" was given by Chief C. E. Weatherbee of the Craig Field Fire Department. Fire Chief H. A. Moore, of the Veterans Hospital Fire Department, loaned several types of fire extinguishers to the school and assisted in teaching their use.

At the conclusion of the school, the members wanted to show in some concrete manner their appreciation of the splendid cooperation received from the Tuscaloosa Fire Department under Chief E. L. "Pete" Mathews. "Since no one could be singled out personally, they could think of no better way than presenting to the Department as a whole a years membership in the N.F.P.A., and contributions were made accordingly." The letter to the N.F.P.A. enclosing a check for this membership was signed jointly by W. M. Walton, Chairman, Education Committee, Alabama State Fire College; Ben E. Harris, Associate State Supervisor, in Charge of Public Service Training; and Clyde Landers; T. P. Downs; and Claude Garland, of the Presentation Committee.

19th Illinois Fire College Reports Successful Meeting

THE Nineteenth Illinois Fire College, sponsored by the Illinois Firemen's Association and held at the University of Illinois, June 8th-11th, had an attendance of 530 men from 153 communities, accord-

Notes

ing to a report by L. H. Provine, Director of the Fire College. This attendance included 74 chiefs, 34 assistant chiefs, and 247 firemen as well as several industrial and auxiliary firemen, and fire inspectors. Fire departments represented included 99 volunteer departments, 40 paid departments, and 14 part paid and part volunteer departments.

While the total attendance was slightly below that of last year, there were more men who were "stickers" and remained throughout the entire school. Due to the importance of wartime fire protection, regular sessions at the drill tower were omitted so that all the men present might give their undivided attention to the subjects presented by more than two dozen authorities on fire protection. However, instructors were on duty at the drill tower each day ready to answer questions and put on demonstrations as requested.

The influence of the Fire College was not limited to the 530 men in attendance. Radio station WILL generously broadcasted very nearly the entire fire college program.

Plans are now underway to make the twentieth annual Illinois Fire College next year an outstanding "Victory Fire College."

5th Pennsylvania Firemen's Training Conference This Month

THE Fifth Annual Pennsylvania Firemen's Training Conference will be held at Lewistown, Pa., August 16th to 21st. The school will be conducted by the Public Service Institute with the cooperation of Chief A. Nelson Yearick of the Lewistown Fire Department.

Any Pennsylvania fireman who has seen the interesting program (so ably illustrated by "Art" Espey, Adviser, Fire Training for the Public Service Institute) will certainly want to attend. Classes are scheduled for the following groups:

A. Chiefs and Officers
B. Engineers, Drivers, and Mechanics
C. Firemen
D. Fire School Instructors and Fire Department Drillmasters
E. Fire Prevention Inspectors
F. Fire Police (including salvage squads)
G. Rescue Squads
H. Auxiliary Firemen

Western Pennsylvania Firemen Plan Annual Fire School

THE annual fire school of the Western Pennsylvania Firemen's Training Institute, sponsored by the Southwestern Pennsylvania Fire Chief's Association, is to be held at Pennsylvania State Teachers College, California, Pa., on September 6th to 10th. For further information regarding this school contact Henry Neill, Secretary, Western Pennsylvania Firemen's Training Institute, Box 83, Vestaburg, Pa.

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a real special combination suit of Midwestern Rubberized Coat and Bunker Pants, with detachable wool linings. Flexible elastic inner sleeve for wrist. Keeps out water, cold and sparks. All Midwestern coats are so equipped. The coat with Bunker pants, below, are Midwestern's outfit No. 101.

1. Adjustable collar strap.
2. Reinforced collar band for lining.
3. Lining attached with quick snap buttons.
4. Corduroy lined collar.
5. Reinforced, double-stitched seams.
6. Reinforced by rivets at points of strain.
7. Vertical seams in sleeve shoulders.
8. Inside of fabric, heavily napped cloth.
9. Midwestern safety snaps.
10. Two outside pockets.
11. Midwestern's Special Vanitex fabrics.
12. Lining edges reinforced with rubberized fabric.
13. Wool detachable lining.
14. 6-inch storm flap.

BUNKER PANTS

1. Lining held by snap buttons.
2. Rubberized fabric belt in lining.
3. Eight suspender buttons.
4. Safety snap on belt.
5. Two side and one hip pocket.
6. Wool lining.
7. Reinforced adjustable belt.
8. Midwestern's Special Vanitex fabrics.
9. Wide protecting flap.
10. Reinforced by rivets.
11. Cloth crotch pads for pole sliding.
12. Reinforced double stitched seams.

This wool lining can be added to any Midwestern Bunker Pants at a small additional cost.

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WITH A FEDERAL
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The Fury is dependable under all service conditions.

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PACIFIC COAST BRANCH: Hercules Equipment & Rubber Co.
435 Brannan Street, San Francisco, California

Fire Prevention Week

PLANS have been completed and work is well under way to make Fire Prevention Week this fall the most dramatic, effective and far-reaching in the history of the observance. Fire Prevention Week has become a national institution, expanding steadily year after year in value and influence. We hope through the observance this year to reach every man, woman and child on the North American Continent with the fire prevention message.

Fire Prevention Week offers both a challenge and opportunity to every volunteer fire department to render greater service to its community and the week cannot be successful unless all volunteer fire departments lend their whole-hearted support to the movement. Fire Prevention Week, coming as it does in the early fall, provides the impetus for a year-round campaign of education and its effectiveness is largely lost if the effort is confined to a single week.

The National Fire Protection Association will offer to its members and others for this year's campaign a great variety of attractive and effective material. This material will be mailed to all members early in August and will be described in detail in the next issue of VOLUNTEER FIREMEN, but we believe that you will be interested in a preview of it. We are preparing this year four Fire Prevention Week posters (1) a general poster suitable for display throughout the community, (2) a home poster, (3) an industrial poster and (4) a farm poster. A new Fire Prevention Week Handbook containing complete directions for the observance of Fire Prevention Week will be available and will be of particular value to those organizing the campaign in their communities. Special material for distribution in large quantities will include two attractive new folders, one entitled "Trapped by Fire," and the other "13 Ways to Burn Down Your House," special literature for distribution to school children, materials for public speakers, and the like. The posters and other literature are designed to make an appeal to every class of people.

To back up the local campaigns, extensive plans are being made for national publicity. It is expected that similar to precedent of previous years the President, the Governor General of Canada, and the 48 Governors, will all issue Fire Prevention Week proclamations. Special publicity material will be sent to the leading newspapers of the country, all of the radio stations, and to all of the popular magazines and to trade papers and industrial house organs. Special appeals are being made to such organizations as the Boy Scouts of America, the Campfire Girls, the Girl Scouts and the 4-H Clubs.

October 3—9 1943

A SPECIAL effort will be made this year to reach the farmers of the country with the fire prevention message. The Department of Agriculture and the National Fire Protection Association are planning an elaborate publicity campaign in the farm field and special publicity material for that field will be widely distributed.

All of this effort to reach the country as a whole through national media will be directly helpful to the local campaign carried on by the local community and will make the work of any volunteer fire department progressively more effective.

Once the great mass of the public becomes conscious of the elementary principles of fire protection and prevention and the desirability of practising those principles in their daily lives, we can expect a material reduction in the disgraceful loss of life and property from fire that we suffer annually. Fire Prevention Week offers perhaps the greatest opportunity throughout the year for a mass attack upon our fire waste problem. We hope that every volunteer fire department in the United States and Canada will sponsor and carry through a thorough-going persistent campaign of fire prevention education starting on October 3, 1943.

Ladder Collapse Fatal

LIEUT. PAUL HAMILTON of the Salt Lake City Fire Department was killed and three other firemen were severely injured on June 10th, when a 100-foot steel aerial ladder buckled while they were directing a 2½-inch line upon a fire on the ninth floor of the Newhouse Hotel.

Fortunately, such ladder accidents during fire-fighting operations are comparatively infrequent. VOLUNTEER FIREMEN has previously observed that ladder failures usually have occurred when a number of men are bunched-up at the top of a ladder. A safer practice is for only one man to remain at the top, with other necessary men spaced out along the ladder.

ATLAS LIFE NETS

Designed for strength and safety with many special exclusive features — one of which is the patented dual shock absorbers — scientifically engineered with recoil mechanism similar to that used in modern artillery.
This ATLAS feature absorbs the weight of impact, insuring safety to the person jumping and eliminates strain on the men holding the net.

The spring rods (in fixed position) prevents injuries to hands of men operating the net.

ATLAS LIFE NETS are first choice everywhere. Get yours now while they are available.

ATLAS
LIFE BELTS

STANDARD: An extra heavy web belt, strongly reinforced with leather and furnished with steel cadmium-plated hook.

POMPIER: Fitted with ATLAS forged steel hatchet, leather life rope loop and attachments for carrying small tools.

HAND BRAKE BELTS: Light in weight, equipped with comfortable grip on brake and constructed to prevent hand slipping.

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A fire retardant coating material designed to reduce the fire hazard of interior building surfaces and other combustible materials. Protects against the intense, sustained fire.

It is highly adhesive, will bond to wood, wallboard, sheathing, wood fibre material and metal. May be applied over a painted surface, highly moisture resisting.

Shipped ready to use, applied by brush or spray.

as a caulking compound and for certain special uses can be supplied in concentrated form

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WARTIME HAZARDS DEMAND *all-out* PROTECTION

WITH THE THREAT of sabotage added to all the hazards of normal times, all-out protection against fire and unlawful intrusion is a "must" in every industrial establishment.

All-out protection demands supplementing protective manpower with systems that function *automatically,* such as electrically supervised automatic sprinklers, automatic fire alarms, burglar alarms and other automatic intrusion detection systems. Watchmen and guards require the additional support of an outside central station which maintains a continuous check on their activities and provides prompt aid in emergencies.

Thousands of war plants now receive this all-out protection through A.D.T. Central Station Automatic Electric Protection Services. Available in more than 650 cities and towns in the United States, this type of service assures the complete dependability and efficiency of operation which is essential to any "all-out" protection program.

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A·D·T

Electric Protection Services

AGAINST FIRE · BURGLARY · HOLDUP

A NATION-WIDE ORGANIZATION

Country Elevator Fires

(*Continued from Page 8*)

at the top and it is difficult to take hose up through it. There may also be a fixed ladder on the inside of one of the bins but that may be more or less rickety unless it is kept in first-class condition.

It is obvious that there is a very decided need, from the fire-fighting viewpoint, of providing means to get up to the upper part of the house from the outside, because if there is very much of a fire in the cupola the burning embers are sure to careen down through the well hole in the middle of the building. However, it is surprising how many elevator men and firemen do go up to the cupolas of those buildings by just exactly these means and put out fires. We have had a record of at least half a dozen during the last two or three months.

Now, there may be other storage sections attached to the main elevator. There was a case in Fremont, Nebraska, just a few weeks ago where a very large annex was being filled with wheat. It was almost one hundred feet long. They were filling it with a conveyor so arranged that they had to fill one series of bins after another. It was emptied by a long conveyor beneath. They had all the bins filled, out to the end of the building, when a motor took fire. There was no way to get out there, so they had to wait until it burned through to the outside, after which they extinguished the fire. The blaze destroyed the conveying equipment, and in extinguishing this fire, they badly soaked all of this grain below the fire area. That grain swelled sufficiently so that it bulged out all the sides of the bins, to the extent that the entire section had to be rebuilt.

Now, instead of an additional storage section they may have a grinding section in which they will have a large hammer mill run by a 50, 60 or 75-horsepower motor. Stock feed is blown up to a dust collector from which it may go into a bin or it may be sacked as it comes out of the collector. If that material goes into a bin, as it generally does in the Northwest, you have a very good source for a dust explosion, because that is real grain dust.

Briefly, I want to mention the matter of cob and dust houses, because from this cleaner at the top of the elevator there will be a spout out to a dust house. It is quite obvious that if the dust house catches fire and it is very apt to due to spontaneous ignition as that is a common source of fire in dust houses, this spout constitutes a perfect flue into the top of the building. It is surprising how many times people fail to get up in the elevator and either block this off or else break the spout down so as to break that flue connection. I know of one case where the elevator burned because the firemen refused to get up there and block the spout off and refused to let anybody else go up and do it. They stood outside and watched the elevator gradually catch fire from this source and burn down.

The same thing happens in the case of cob houses if the connection isn't broken. There may be a normally closed damper to prevent the spread of fire but sometimes the dampers don't work. It is obviously the sensible thing to get up to the top and block off the spout.

In closing, I may say that all these various points that I have mentioned resolve themselves into the basic factors of inspection, preparation and cooperation. It is from these things come intelligent fighting of country elevator fires — always important to the community, now of importance to the nation in its war effort, soon to become even of greater importance in winning the peace.

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British Fire Prevention Program

AN intensive fire prevention campaign has been launched on the British home front by 100 fire insurance companies in cooperation with the British Fire Offices Committee. The aim is to prevent many of the 1,000 fires a day that have been causing a damage of one billion Pounds or approximately $4,000,000 each month in Great Britain. The British Government is interested in the campaign because of the adverse effect the needless fire loss is having on the production of essential war materials. It is pointed out that more important than the monetary loss is the labor, the raw material and the shipping space which must be diverted from the war effort to replace the loss.

As in the United States, common fire hazards have been the causes of the great majority of the fires that hurt the war effort. Statistics in Britain show that 50 per cent of the fires are due to careless use of cigarettes, pipes, and matches. Accordingly, the campaign has been planned to meet the main source of fires. Despite the shortage of poster materials, fire prevention posters are appearing all over Britain, so important is this fire prevention campaign considered. A special film is being shown in factories, canteens and other fire danger points as well as in movie houses. A main feature in the campaign is a series of announcements appearing in all newspapers and most magazines.

This is believed to be the first nationwide campaign to prevent fires ever conducted in Great Britain. Both the Government and the participating insurance organizations are watching the monthly fire loss statistics with keen interest to observe the results of this effort. The campaign is scheduled to continue throughout 1943.

If the people of Britain thus recognize the importance of reducing their toll of 1,000 fires a day as an aid to the war effort, citizens of the United States should appreciate that our 2,000 fires a day must also be of considerable help to Hitler.

When Someone Yells "FIRE!"

WHO MAKES THE NEXT MOVE?

What happens, if fire strikes in your plant?

Who grabs an extinguisher and hits the blaze hard, without panic, without fumbling? Who understands fire-fighting and the weapons with which fires are quickly snuffed out? *How many of your employees know how to handle an extinguisher?*

Fire extinguishers are easy to understand, and the basic facts about fire are simple. The best way to train your workers is by actual *demonstration.* Show them real fires, with extinguishers in action. Stage these demonstrations at your own plant, using your own equipment.

Walter Kidde & Company will send you "How To Teach Fire-Fighting." It tells how to handle demonstrations effectively, how to explain extinguishers and various types of fires. Write now for your own copy. We'll mail it promptly.

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HIGH PRESSURE GASES + FIRE PROTECTION

THIS ADVERTISEMENT IS ONE OF A SERIES APPEARING CURRENTLY IN INDUSTRIAL PUBLICATIONS

MEMBERSHIP PLAN

- Through the Volunteer Firemen's Section, fire companies may become N.F.P.A. members. Each member fire company is entitled to have VOLUNTEER FIREMEN magazine sent to the homes of ten firemen.
- As a member, the fire company receives at headquarters a set of all other regular N.F.P.A. publications. This includes the QUARTERLY MAGAZINE and monthly NEWS LETTER.
- Membership in the National Fire Protection Association costs ten dollars per year. If more than ten firemen want to receive the magazine, an additional one dollar should be sent for each fireman in excess of the first ten enrolled.

MEMBERSHIP GAINS

DEFYING the usual summer slump in membership, the number of fire companies in the Section has reached a new high of 881, with 17,271 individual firemen enrolled. Last month 29 departments with 348 men were newly enrolled as listed below, and 34 companies with 661 men renewed membership.

Ragsdale Airfield, Fairfield, Calif.
Orinda Fire Department, Orinda, Calif.
Tarpon Springs Fire Department, Tarpon, Fla.
Bell Aircraft Corp., Marietta, Ga.
Huntingburg Fire Company No. 1, Huntingburg, Ind.
Lawrenceberg Volunteer Fire Department, Lawrenceberg, Ind.
Aberdeen Proving Ground Fire Department, Aberdeen Proving Grounds, Md.
Niagara Engine Company, Millis, Mass.
Emerson Electric Mfg. Company, St. Louis, Mo.
Alliance Volunteer Fire Department, Alliance, Neb.
Auburn Hose Company No. 1, Auburn, Neb.
Haddon Fire Company No. 1, Haddonfield, N. J.
Peerless Engine Company No. 2, Maywood, N. J.
Montauk Fire Department, Montauk, N. Y.
Norwich Knitting Company, Norwich, N. Y.
Old Forge Fire Department, Old Forge, N. Y.
Peekskill Fire Department, Peekskill, N. Y.
North Sea Fire Department, North Sea, N. Y.
Condon Volunteer Fire Department, Condon, Ore.
DuBois Hose Company No. 1, DuBois, Pa.
Lansdowne Fire Company No. 1, Lansdowne, Pa.
Swarthmore Fire & Protective Assn., Swarthmore, Pa.
Youngsville Volunteer Fire Department, Youngsville, Pa.
Maryville Fire Department, Maryville, Tenn.
Uvalde Fire Department, Uvalde, Texas
Milton Fire Department, Milton, Vt.
Proctorsville Fire Department, Proctorsville, Vt.
Kemmerer Volunteer Fire Department, Kemmerer, Wyo.
Wallaceburg Brass, Ltd., Wallaceburg, Ont.

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500 to 600 gallons per minute capacity. Available for immediate delivery on moderate priority. *Write Us!*

HOWE FIRE APPARATUS CO., Anderson, Ind.

A New "Night Hitch"!

LYONS, KANSAS — Volunteer Fireman El Anderson jumped up in the middle of the night to dress for an alarm. His wife challenged him shortly thereafter: "Take those off," she demanded. "You're not going to wear my slacks to any fire." — *Washington Post.*

"See here, Snodgrass . . . your concern over the nation's food supply must not interfere with the business on hand!"

For more than a quarter of a century this Fyr-Fyter Trade Mark has been the symbol of dependable fire protection. Today Fyr-Fyter is performing the biggest job in its career. Increased Fyr-Fyter production facilities are engaged in 100% war work. Our entire output is going to the Armed Forces, War Production Plants and other Concerns and Institutions classed as essential to the war effort.

When victory is won, we will have an improved and enlarged line of Fyr-Fyter extinguishers that will contribute even more than ever before to America's protection against fire.

THE FYR-FYTER CO.

ARMY NAVY

Dept. 20, Dayton, Ohio

FYR-FYTER

MANUFACTURERS' ANNOUNCEMENTS

A NEW type of valve for carbon dioxide fire extinguishers, known as the "Squeez-Grip," has been developed by engineers of the C-O-TWO Fire Equipment Company of Newark, N. J. The new valve operated by a lever directly over the carrying handle of the extinguisher. By merely applying pressure, or squeezing, with one hand, the valve is opened and the gas discharged. On releasing the pressure, the valve closes and the gas discharge is cut off.

One of the features of this device is that the valve can be opened and closed without setting down the extinguishers. As the operator, carrying the extinguisher with one hand and holding the discharge horn in the other, can easily start or stop the discharge while in motion, there is no loss of time or gas while maneuvering around a fire. On closing, the valve is forced tightly against its seat by the pressure of the gas within the cylinder.

The manufacturer states that the "Squeez-Grip" valve is applicable to any size carbon dioxide extinguisher of the hand type.

●

WALTER KIDDE & COMPANY has issued two excellent publications which should be on the shelves of every fire department. One, entitled "How to Teach Fire Fighting" is designed to aid factory executives in instructing employees in the proper use of fire extinguishers. It is equally useful to fire department officers who do fire prevention work with the general public. This booklet describes the classification of various types of fires, the kinds of extinguishers best suited to each, and the methods of setting up interesting demonstrations in order to effectively teach the proper use of each type of extinguisher.

The second new Kidde publication is a 36-page illustrated manual entitled "Fire and How to Fight It." In simple graphic terms this brochure describes and illustrates the fundamental facts about fires and their control — what makes them burn, the different types of fires and the proper first-aid handling of each. All common approved types of extinguishers are covered in the text. The latter part of the booklet is devoted to the more extensive Kidde built-in carbon dioxide extinguishing systems. The Kidde life-raft and lifebelt inflation equipment is briefly touched on and the book closes with descriptions of the three types of mobile extinguishing units made by Kidde — the wheeled extinguishers, trailer units, and the emergency truck.

Both of these publications will be sent without charge to any fire department officer. Address your request to Walter Kidde & Co., Inc., 140 Cedar St., New York 6, N. Y.

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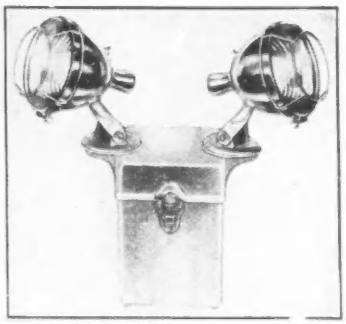

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SQUEEZ-GRIP

JUST Squeeze It

—It's as Simple as That

The SQUEEZ-GRIP valve is a development so sensational, and of such great importance, that it actually changes the idea of what constitutes speed in fire fighting. It ends the delay, the waste motion of setting down an extinguisher to operate a "hand-wheel" valve.

NEW SQUEEZ-GRIP SAVES TIME AND GAS

With this new C-O-TWO release valve the operator merely closes his hand to operate the release lever, just above the carrying handle, and carbon dioxide gas, the fastest non-damaging fire extinguishing agent, is released against the fire in split seconds. Time is saved . . . gas is saved. Even while carrying a fifteen pound extinguisher, C-O-TWO gas can be discharged and shut off as quickly as the hand is closed and opened. The New SQUEEZ-GRIP is the most modern contribution to fire protection. It's Safer because It's Faster.

C-O-TWO is a registered trademark and corporate name of this company. C-O-TWO is inspected and labeled by the Underwriters' Laboratories; approved by Factory Mutuals and the Bureau of Marine Inspection and Navigation. To be safe specify C-O-TWO.

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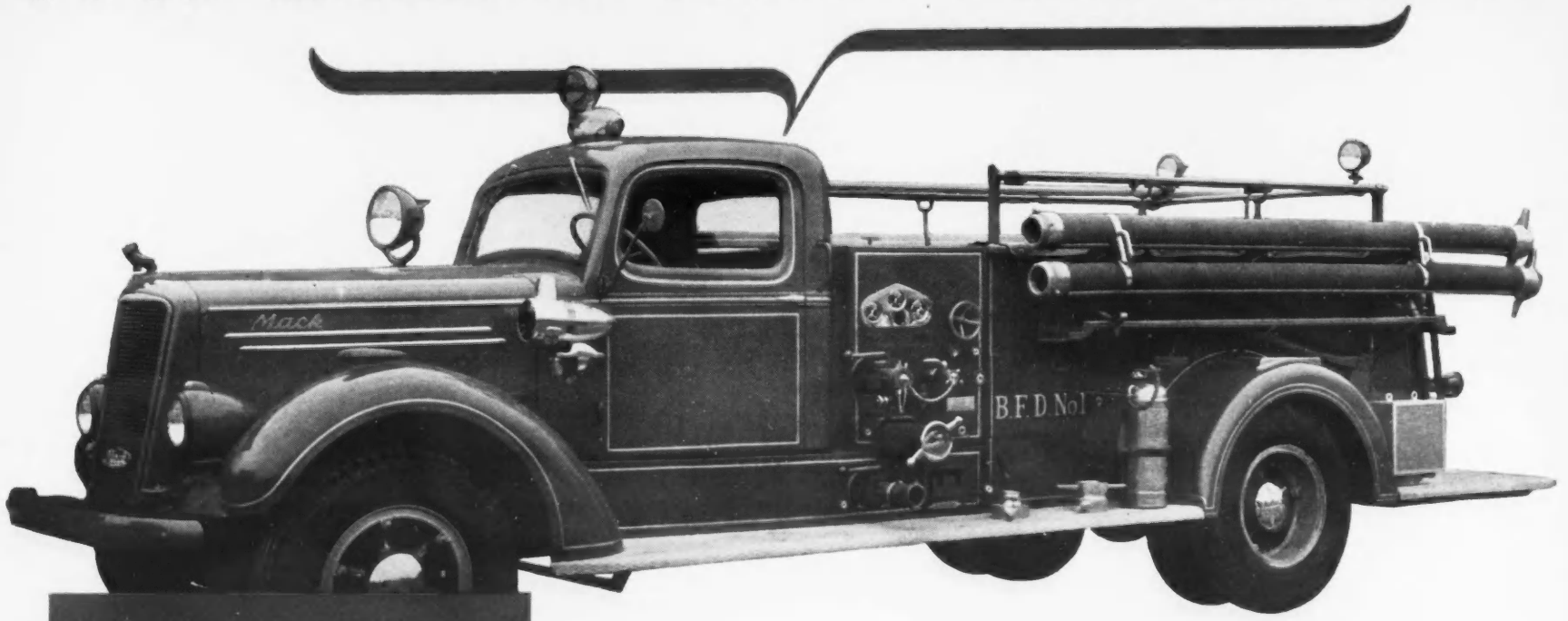

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